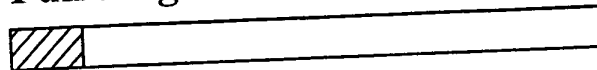


FIG. 1

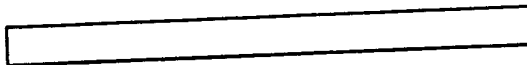
Construct of Amb a1 cDNA - II

Full-length Amb a1 (396 codon)

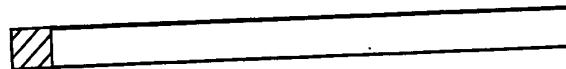


Plant Leader Sequence (36AA)

$\Delta 36$ Amb a1



ssHA $\Delta 36$ Amb a1



Virus Leader Sequence (14AA)

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FIG. 2

Comparison of codon usage (Plant vs. Human)

HIS

	Plant	Human
CAT	83%	0%
CAC	17%	100%

GLN

	Plant	Human
CAA	90%	30%
CAG	10%	70%

ASP

	Plant	Human
GAT	76%	31%
GAC	24%	69%

GLU

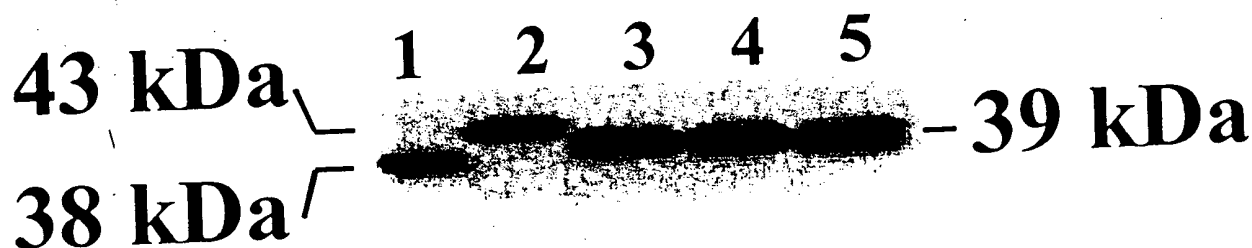
	Plant	Human
GAA	69%	25%
GAG	31%	75%

0583333-090474

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FIG. 3

Expression of Amb a1
in COS-7 cell - III



1: Purified AgE

2: Amb a1/pNDKm (x 1)

3: Δ 36Amb a1/pNDKm (x 3)

4: ssHA Δ 36Amb a1/pNDKm (x 3)

5: hssHA Δ 36Amb a1/pNDKm (x 10)

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Induction of Antigen-specific Antibody and Cytokine *in vivo* - III

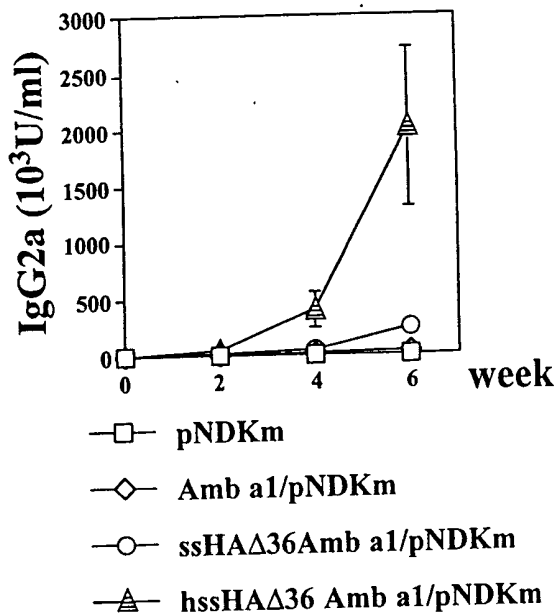


FIG. 4A

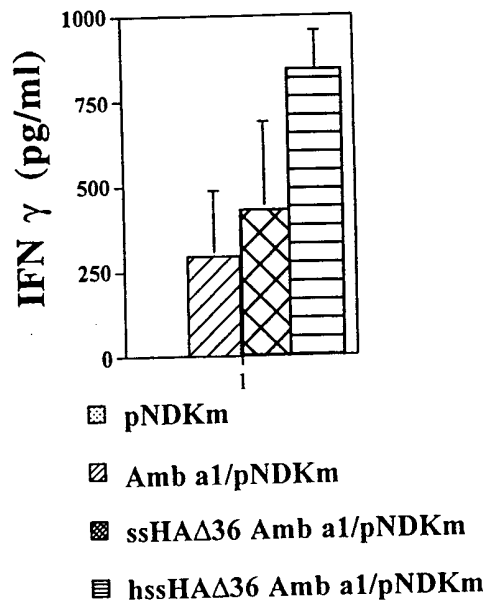


FIG. 4B

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Induction of Antigen-specific Antibody and Cytokine *in vivo* - VI

(Co-injection of ISS-ODN with 50 μ g of hssHA Δ 36Amb a1/pNDKm)

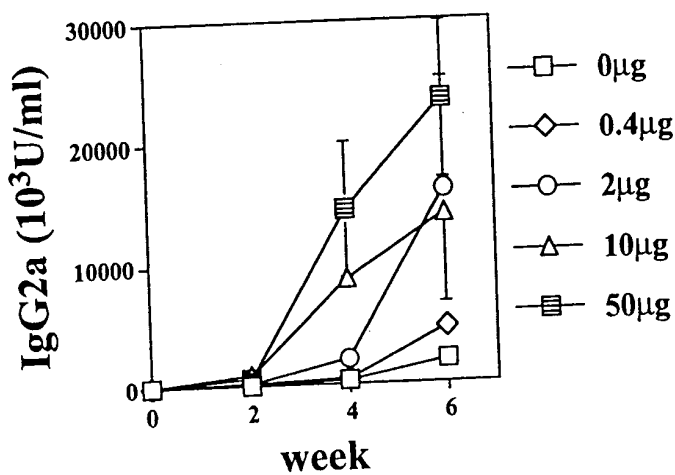


FIG. 5A

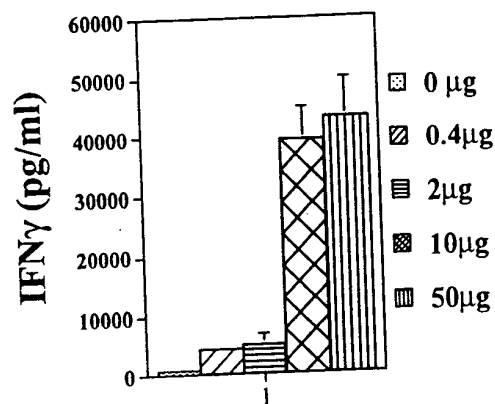
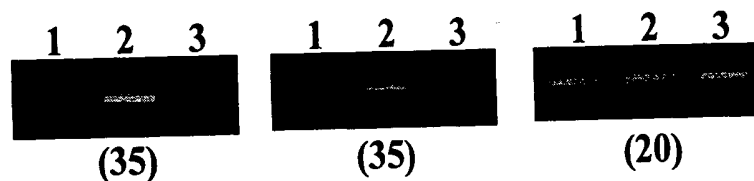


FIG. 5B

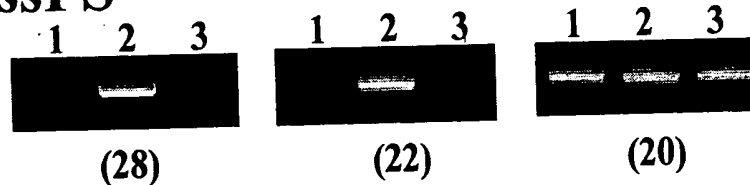
FIG. 6

In vivo Efficacy of ISS-ODN (dsPO vs. ssPS)

dsPO



ssPS



IL-6

IL-12

G3PDH

1: PBS, 2: ISS-ODN, 3: M-ODN

- Injection of ISS-ODN(i.v.)
[200µg/mouse]
- Isolation of spleen after 2
hr post-injection
- Isolation of mRNA
- Detection of IL-6/IL-12
transcript by RT-PCR

Reduction of Amb a1-specific IgE *in vivo* (week 8)

FIG. 7A

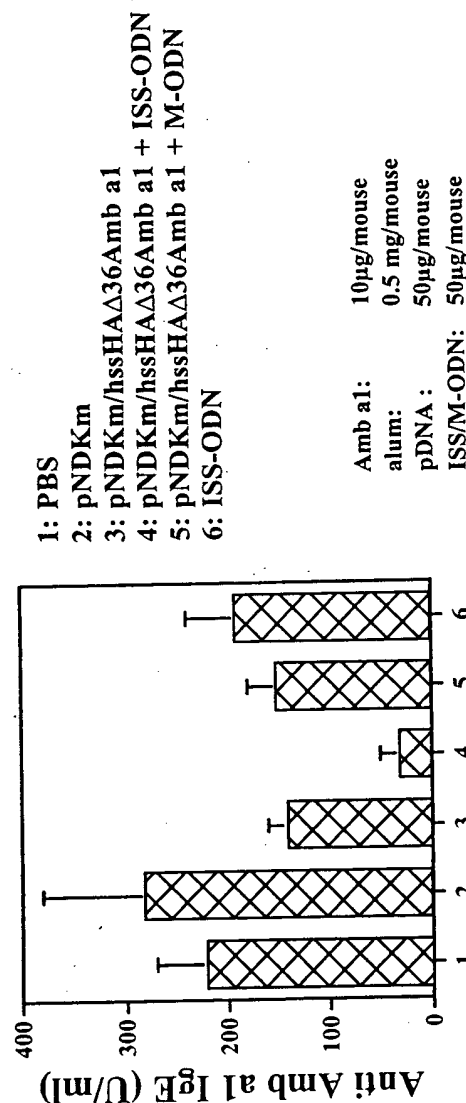


FIG. 7B

